

PATENT CLAIMS

1. (Currently Amended) A method for the removal of silver from a cuprous chloride solution in a copper recovery process, characterized in that comprising removing, in at least two stages, silver is removed from a cuprous chloride solution with soluble mercury, using fine-grained copper in at least two stages, whereby, the method comprising:

feeding mercury is fed to into the solution at different preselected stages in a certain preselected molar ratio with regard to the silver in the solution[[],];

precipitating a generated silver amalgam is precipitated on the onto a surface of fine-grained copper[[],];

removing the silver amalgam is removed from the cuprous chloride solution for the separation of mercury and silver[[],];

recycling after which soluble mercury is recycled back to silver removal; and treating the precipitated silver compound is treated for the recovery of silver.

2. (Currently Amended) A method according to claim 1, characterized in that wherein the molar ratio of mercury to silver in [[the]] a first amalgam precipitation stage is 0.5– 2.

3. (Currently Amended) A method according to claims 1 or 2, characterized in that claim 1, wherein the molar ratio of mercury to silver in [[the]] a second amalgam precipitation stage is at least 2.

4. (Currently Amended) A method according to any of the preceding claims, characterized in that claim 3, wherein the molar ratio of mercury to silver in the second amalgam precipitation stage is between 2 – 10.

5. (Currently Amended) A method according to ~~any of the preceding claims, characterized in that claim 1, wherein~~ the particle size of the fine-grained copper is less than 200 pm.

6. (Currently Amended) A method according to claim 5, ~~characterized in that wherein~~ the amount of copper powder feed is in the range of 100 g/L.

7. (Currently Amended) A method according to ~~any of the preceding claims, characterized in that claim 1, further comprising feeding the copper powder is fed to a mercury removal stage after [[the]] silver removal stages, from which it moves countercurrently in relation to the solution flow.~~

8. (Currently Amended) A method according to ~~any of the preceding claims, characterized in that claim 1, further comprising leaching the precipitated silver amalgam is leached~~ into a dilute chloride solution using an oxidant, whereby the mercury dissolves as mercury chloride and the silver precipitates as silver chloride.

9. (Currently Amended) A method according to claim 8, ~~characterized in that wherein~~ the oxidant used is sodium hypochlorite.

10. (Currently Amended) A method according to claim 8, ~~characterized in that wherein~~ the oxidant used is hydrogen peroxide.

11. (Currently Amended) A method according to claim 8, ~~characterized in that wherein~~ the oxidant used is oxygen.

12. (Currently Amended) A method according to claim 8, ~~characterized in that further comprising routing the mercury chloride is routed back to silver leaching.~~

13. (Currently Amended) A method according to ~~any of the preceding claims, characterized in that claim 8, further comprising routing the silver chloride is routed to silver recovery.~~

14. (Currently Amended) A method according to any of the preceding claims, characterized in that claim 8, wherein an [[the]] alkali chloride content of the concentrated chloride solution is at least 200 g/L.

15. (Currently Amended) A method according to any of the preceding claims, characterized in that claim 1, wherein an [[the]] amount of monovalent copper in the solution to be purified is 30 — 100 g/L.

16. (Currently Amended) A method according to any of the preceding claims, characterized in that claim 1, wherein silver removal is performed at a pH value of 1 - 5.

17. (Currently Amended) A method according to any of the preceding claims, characterized in that claim 1, further comprising removing silver from the cuprous chloride solution using fine-grained copper before [[the]] amalgam precipitation [[that]] occurs with mercury, the silver is removed from the cuprous chloride solution using fine-grained copper.

18. (Currently Amended) A method according to claim 17, characterized in that wherein a [[the]] particle size of the fine-grained copper powder is less than 200 pm.

19. (Currently Amended) A method according to claim 18, characterized in that wherein the amount of fine-grained copper powder feed is around about 100 g/L.